WEST

Help | Logout | Interrupt

Main Menu | Search Form | Posting Counts | Show S Numbers | Edit S Numbers | Preferences | Cases

Search Results -

Terms	Documents
L12 and vivo	1

Database: US Patents Full-Text Database
US Pre-Grant Publication Full-Text Database
JPO Abstracts Database
EPO Abstracts Database
Derwent World Patents Index
IBM Technical Disclosure Bulletins

Search: L15

Refine Search

Recall Text | Clear

Search History

DATE: Thursday, May 23, 2002 Printable Copy Create Case

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT,PGPB,JPAB,EPAB,DWPI,TDBD; PLUR=YES; OP=OR			
L15	L12 and vivo	1	L15
L14	L12 and "in vivo"	0	L14
L13	L12 and organism$	1	L13
L12	5738985 [pn]	3	L12
L11	HAV near10 treat$	44	L11
L10	HAV and antisense near10 IRES	5	L10
L9	L7 and antisense near10 IRES	5	L9
L8	L7 and antisense	25	L8
L7	L6 and IRES	37	L7
L6	"hepatitis A" or HAV	1379	L6
L5	"hepatitis A"	1	L5
L4	"hepatitis A" and complementary	0	L4
L3	"hepatitis A" and antisense	0	L3
L2	hepatitis near3 A and antisense	0	L2
L1	hepatitis near3 A and IRES	0	L1

END OF SEARCH HISTORY

WEST

Your wildcard search against 2000 terms has yielded the results below

Search for additional matches among the next 2000 terms

Generate Collection | Print

Search Results - Record(s) 1 through 44 of 44 returned.

1. Document ID: US 20010048940 A1

L11: Entry 1 of 44 File: PGPB Dec 6, 2001

PGPUB-DOCUMENT-NUMBER: 20010048940
PGPUB-FILING-TYPE: new
DOCUMENT-IDENTIFIER: US 20010048940 A1

TITLE: CATIONIC AMPHIPHILE MICELLAR COMPLEXES

PUBLICATION-DATE: December 6, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	COUNTRY	RULE-47
TOUSIGNANT, JENNIFER D.	CAMBRIDGE	MA	US	
EASTMAN, SIMON J.	HUDSON	MA	US	
LEE, EDWARD R	NATICK	MA	US	
SCHEULE, RONALD K.	HOPKINTON	MA	US	
CHENG, SENG H.	WELLESLEY	MA	US	
NIETUPSKI, J.	MILLBURY	MA	US	
CHU, QIUMING	MELROSE	MA	US	
MARSHALL, JOHN	HOPEDALE	MA	US	

US-CL-CURRENT: 424/450; 424/468, 435/458, 514/44

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

2. Document ID: US 6214534 B1

L11: Entry 2 of 44 File: USPT Apr 10, 2001

US-PAT-NO: 6214534
DOCUMENT-IDENTIFIER: US 6214534 B1

TITLE: Biological compositions containing quenchers of type I and type II photodynamic reactions

DATE-ISSUED: April 10, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Horowitz; Bernard	New Rochelle	NY		
Williams; Bolanle	New York	NY		
Margolis-Nunno; Henrietta	New York	NY		
Chin; Sing N.	New York	NY		

US-CL-CURRENT: 435/2; 435/173.3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | Claims | KWIC | Draw Desc | Image

---

3. Document ID: US 6194210 B1

L11: Entry 3 of 44 File: USPT Feb 27, 2001

US-PAT-NO: 6194210
DOCUMENT-IDENTIFIER: US 6194210 B1

TITLE: Hepatitis A virus culture process

DATE-ISSUED: February 27, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Leu; Frank S.	Lansdale	PA		
Seifert; Douglas B.	Hatfield	PA		

US-CL-CURRENT: 435/403; 424/226.1, 435/235.1, 435/239, 435/383, 435/394, 435/455, 435/456, 435/69.3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

---

4. Document ID: US 6180110 B1

L11: Entry 4 of 44 File: USPT Jan 30, 2001

US-PAT-NO: 6180110
DOCUMENT-IDENTIFIER: US 6180110 B1

TITLE: Attenuated hepatitis a virus vaccine which grows in MRC 5 cells

DATE ISSUED: January 30, 2001

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Parkhouse, Ann M.	Ellicott City	MD		
Emerson; Suzanne U.	Rockville	MD		
Purcell; Robert H.	Boyds	MD		
D'Hondt; Eric	Ottenburg			BEX

US-CL-CURRENT: 424/226.1; 435/237

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

5. Document ID: US 6113912 A

L11: Entry 5 of 44 File: USPT Sep 5, 2000

US-PAT-NO: 6113912
DOCUMENT-IDENTIFIER: US 6113912 A

TITLE: Hepatitis A virus vaccines

DATE-ISSUED: September 5, 2000

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Funkhouser; Ann W.	Ellicott City	MD		
Emerson; Suzanne U.	Rockville	MD		
Purcell; Robert H.	Boyds	MD		
D'Hondt; Eric	Ottenburg			BEX

US-CL-CURRENT: 424/226.1; 424/93.1, 424/93.6, 435/235.1, 435/237, 435/320.1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

6. Document ID: US 5981163 A

L11: Entry 6 of 44 File: USPT Nov 9, 1999

US-PAT-NO: 5981163
DOCUMENT-IDENTIFIER: US 5981163 A

TITLE: Process for the sterilization of biological compositions using irradiation and quenchers of type I and type II photodynamic reactions

DATE ISSUED: November 9, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Horowitz; Bernard	New Rochelle	NY		
Williams; Bolanle	New York	NY		
Margolis-Nunno; Henrietta	New York	NY		
Chin; Sing N.	New York	NY		

US-CL-CURRENT: 435/4; 435/173.1, 435/173.3, 435/236, 604/20

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

7. Document ID: US 5874563 A

L11: Entry 7 of 44 File: USPT Feb 23, 1999

US PAT NO: 5874563
DOCUMENT-IDENTIFIER: US 5874563 A

TITLE: Hepatitis G virus and molecular cloning thereof

DATE ISSUED: February 23, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kim; Jungsuh P.	Palo alto	CA		
Fry; Kirk E.	Palo alto	CA		
Young; Lavonne Marie	Palo alto	CA		
Linnen; Jeffrey M.	Foster City	CA		
Wages; John	Corvallis	OR		

US-CL-CURRENT: 536/23.72; 435/5, 435/69.3, 435/91.2, 435/91.33, 536/24.3, 536/24.32

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

---

8. Document ID: US 5856134 A

L11: Entry 8 of 44 File: USPT Jan 5, 1999

US-PAT-NO: 5856134
DOCUMENT-IDENTIFIER: US 5856134 A

TITLE: Hepatitis G virus and molecular cloning thereof

DATE-ISSUED: January 5, 1999

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kim; Jungsuh P.	Palo Alto	CA		
Fry; Kirk E.	Palo Alto	CA		
Young; LaVonne Marie	Palo Alto	CA		
Linnen; Jeffrey M.	Foster City	CA		
Wages; John	Corvallis	OR		

US-CL-CURRENT: 435/69.3; 424/189.1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

---

9. Document ID: US 5849562 A

L11: Entry 9 of 44 File: USPT Dec 15, 1998

US-PAT-NO: 5849562
DOCUMENT-IDENTIFIER: US 5849562 A

TITLE: Production of complementary DNA representing hepatitis A viral sequences by recombinant DNA methods and uses therefor

DATE-ISSUED: December 15, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Purcell; Robert H.	Boyds	MD		
Emerson; Suzanne U.	Rockville	MD		

US-CL-CURRENT: 435/325; 435/235.1, 435/236, 435/364, 536/23.1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

10. Document ID: US 5849532 A

L11: Entry 10 of 44 File: USPT Dec 15, 1998

US-PAT-NO: 5849532
DOCUMENT-IDENTIFIER: US 5849532 A

TITLE: Hepatitis G virus and molecular cloning thereof

DATE-ISSUED: December 15, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kim; Jungsuh P.	Palo Alto	CA		
Fry; Kirk E.	Palo Alto	CA		
Young; LaVonne Marie	Palo Alto	CA		
Linnen; Jeffrey M.	Foster City	CA		
Wages; John	Corvallis	OR		

US-CL-CURRENT: 435/69.3; 435/252.3, 435/320.1, 435/69.1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

11. Document ID: US 5824507 A

L11: Entry 11 of 44 File: USPT Oct 20, 1998

US-PAT-NO: 5824507
DOCUMENT-IDENTIFIER: US 5824507 A

TITLE: Hepatitis G virus and molecular cloning thereof

DATE-ISSUED: October 20, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kim; Jungsuh P.	Palo Alto	CA		
Fry; Kirk E.	Palo Alto	CA		
Young; LaVonne Marie	Palo Alto	CA		
Linnen; Jeffrey M.	Foster City	CA		
Wages; John	Corvallis	OR		

US-CL-CURRENT: 435/69.3; 435/5, 530/826

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

12. Document ID: US 5789232 A

L11: Entry 12 of 44 File: USPT Aug 4, 1998

US-PAT-NO: 5789232
DOCUMENT-IDENTIFIER: US 5789232 A

TITLE: Process for isolating a viral antigen preparation

DATE-ISSUED: August 4, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Nothacker; Klaus-Dieter	Schmachthagen			DEX

US-CL-CURRENT: 435/239; 435/235.1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

13. Document ID: US 5766840 A

L11: Entry 13 of 44 File: USPT Jun 16, 1998

US-PAT-NO: 5766840
DOCUMENT-IDENTIFIER: US 5766840 A

TITLE: Hepatitis G virus and molecular cloning thereof

DATE-ISSUED: June 16, 1998

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kim; Jungsuh P.	Palo Alto	CA		
Fry; Kirk E.	Palo Alto	CA		
Young; LaVonne Marie	Palo Alto	CA		
Linnen; Jeffrey M.	Foster City	CA		
Wages; John	Corvallis	OR		

US-CL-CURRENT: 435/5; 530/388.3, 530/389.4

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

14. Document ID: US 5712086 A

L11: Entry 14 of 44 File: USPT Jan 27, 1998

US-PAT-NO: 5712086
DOCUMENT-IDENTIFIER: US 5712086 A

TITLE: Process for transfusing cell containing fractions sterilized with radiation and a quencher of type I and type II photodynamic reactions

DATE-ISSUED: January 27, 1998

INVENTOR INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Horowitz; Bernard	New Rochelle	NY		
Williams; Bolanle	New York	NY		
Margolis-Nunno; Henrietta	New York	NY		
Chin; Sing N.	New York	NY		

US-CL-CURRENT: 435/2; 435/173.1, 435/173.3

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

15. Document ID: US 5677162 A

L11: Entry 15 of 44 File: USPT Oct 14, 1997

US-PAT-NO: 5677162
DOCUMENT-IDENTIFIER: US 5677162 A

TITLE: Method for activating prothrombin to thrombin

DATE ISSUED: October 14, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Zou; Jinsheng	Bronx	NY		
Hamman; John	Baltimore	MD		
Marx; Gerard	New York	NY		
Horowitz; Bernard	New Rochelle	NY		

US-CL-CURRENT: 435/214; 424/94.64, 435/236, 435/238

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

16. Document ID: US 5622861 A

L11: Entry 16 of 44 File: USPT Apr 22, 1997

US-PAT-NO: 5622861
DOCUMENT-IDENTIFIER: US 5622861 A

TITLE: Recombinant DNA encoding hepatitis A virus receptor

DATE-ISSUED: April 22, 1997

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kaplan; Gerardo	Rockville	MD		
Feinstone; Stephen M.	Washington	DC		

US-CL-CURRENT: 435/252.3; 435/320.1, 435/69.1, 530/350, 536/23.5

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

17. Document ID: US 5549896 A

L11: Entry 17 of 44 File: USPT Aug 27, 1996

US-PAT-NO: 5549896
DOCUMENT-IDENTIFIER: US 5549896 A

TITLE: Hepatitis a virus strain, method for the isolation of new hepatitis a virus strains and hepatitis a vaccines

DATE-ISSUED: August 27, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gl uck; Reinhard	Spiegel/Bern			CHX
Brantschen; Stefan	Bern			CHX

US-CL-CURRENT: 424/226.1; 435/235.1, 435/236, 435/237, 435/238, 435/5

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

18. Document ID: US 5521082 A

L11: Entry 18 of 44 File: USPT May 28, 1996

US-PAT-NO: 5521082
DOCUMENT-IDENTIFIER: US 5521082 A

TITLE: Novel process for purification of hepatitis a virions

DATE-ISSUED: May 28, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Lewis; John A.	West Chester	PA		
Armstrong; Marcy E.	Schwenksville	PA		
Emini; Emilio A.	Paoli	PA		

US-CL-CURRENT: 435/235.1; 435/236, 435/239

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

19. Document ID: US 5516630 A

L11: Entry 19 of 44 File: USPT May 14, 1996

US-PAT-NO: 5516630
DOCUMENT-IDENTIFIER: US 5516630 A

TITLE: Methods of detecting hepatitis A virus

DATE-ISSUED: May 14, 1996

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Ticehurst; John R.	Kensington	MD		
Baltimore; David	New York	NY		
Feinstone; Stephen M.	Washington	DC		
Purcell; Robert H.	Boyds	MD		
Racaniello; Vincent R.	Scotch Plains	NJ		
Baroudy; Bahige M.	Cincinnati	OH		

US-CL-CURRENT: 435/5; 536/23.1, 536/23.72

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

---

20. Document ID: US 5294548 A

L11: Entry 20 of 44 File: USPT Mar 15, 1994

US PAT NO: 5294548
DOCUMENT IDENTIFIER: US 5294548 A

TITLE: Recombianant Hepatitis a virus

DATE-ISSUED: March 15, 1994

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
McLinden; James H.	Mishawaka	IN		
Rosen; Elliot D.	South Bend	IN		
Winokur; Patricia L.	Chevy Chase	MD		
Stapleton; Jack T.	Iowa City	IA		

US-CL-CURRENT: 435/235.1; 435/320.1, 530/350

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

---

21. Document ID: US 5215745 A

L11: Entry 21 of 44 File: USPT Jun 1, 1993

US-PAT-NO: 5215745
DOCUMENT-IDENTIFIER: US 5215745 A

TITLE: Method for treating viral diseases with attenuated virus

DATE-ISSUED: June 1, 1993

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Csatary; Laszlo K.	Ft. Lauderdale	FL		
Massey; Richard J.	Rockville	MD		

US-CL-CURRENT: 424/281.1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

22. Document ID: US 5124148 A

L11: Entry 22 of 44 File: USPT Jun 23, 1992

US-PAT-NO: 5124148
DOCUMENT-IDENTIFIER: US 5124148 A

TITLE: Method for treating viral diseases with attenuated virus

DATE-ISSUED: June 23, 1992

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Csatary; Laszlo K.	Ft. Lauderdale	FL		
Massey; Richard J.	Rockville	MD		

US-CL-CURRENT: 424/281.1

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

23. Document ID: US 5024750 A

L11: Entry 23 of 44 File: USPT Jun 18, 1991

US-PAT-NO: 5024750
DOCUMENT-IDENTIFIER: US 5024750 A

TITLE: Process for converting heavy hydrocarbon oil

DATE-ISSUED: June 18, 1991

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Sughrue, II; Edward L.	Bartlesville	OK		
Tooley; Patricia A.	Bartlesville	OK		
Bertus; Brent J.	Bartlesville	OK		
Grayson; Bille S.	Bartlesville	OK		

US-CL-CURRENT: 208/57; 208/212, 208/216PP, 208/49, 208/67, 208/73, 208/85, 208/86, 208/87, 208/88, 208/89, 208/95, 208/96, 208/97

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

24. Document ID: US 4888189 A

L11: Entry 24 of 44 File: USPT Dec 19, 1989

US-PAT-NO: 4888189
DOCUMENT-IDENTIFIER: US 4888189 A

TITLE: Simultaneous double reverse osmosis process for production of low and non-alcoholic beverages

DATE-ISSUED: December 19, 1989

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Gnekow; Barry R.	Los Gatos	CA		

US-CL-CURRENT: 426/231; 210/652, 426/592

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

25. Document ID: US 4870044 A

L11: Entry 25 of 44 File: USPT Sep 26, 1989

US-PAT-NO: 4870044
DOCUMENT-IDENTIFIER: US 4870044 A

TITLE: Treated alumina material for fixed hydrofining beds

DATE-ISSUED: September 26, 1989

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Kukes; Simon G.	Naperville	IL		
Harris; Jesse R.	Bartlesville	OK		

US-CL-CURRENT: 502/220; 502/208, 502/303, 502/304, 502/306, 502/324, 502/328, 502/331, 502/342

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

26. Document ID: US 4614793 A

L11: Entry 26 of 44 File: USPT Sep 30, 1986

US-PAT-NO: 4614793
DOCUMENT-IDENTIFIER: US 4614793 A

TITLE: Hepatitis A--subunit antigen

DATE-ISSUED: September 30, 1986

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Hughes; Joseph V.	Harleysville	PA		
Scolnick; Edward M.	Wynnewood	PA		
Tomassini; Joanne E.	Harleysville	PA		

US-CL-CURRENT: 530/350; 530/418, 530/806, 530/826, 930/223

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

27. Document ID: US 4596674 A

L11: Entry 27 of 44 File: USPT Jun 24, 1986

US-PAT-NO: 4596674
DOCUMENT-IDENTIFIER: US 4596674 A

TITLE: Immunogenic HAV peptides

DATE-ISSUED: June 24, 1986

INVENTOR-INFORMATION:

NAME	CITY	STATE	ZIP CODE	COUNTRY
Emini; Emilio A.	Paoli	PA		
Boger; Joshua S.	Westfield	NJ		
Hughes; Joseph V.	Harleysville	PA		

US-CL-CURRENT: 530/326; 530/327, 530/328, 530/329, 530/807, 930/20, 930/223, 930/DIG.802, 930/DIG.810

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

28. Document ID: JP 08005637 A

L11: Entry 28 of 44 File: JPAB Jan 12, 1996

PUB-NO: JP408005637A
DOCUMENT-IDENTIFIER: JP 08005637 A
TITLE: METHOD FOR MEASURING HAV ANTIGEN AND ANTIBODY IMMUNOLOGIALLY REACTIVE THERETO

PUBN-DATE: January 12, 1996

INVENTOR-INFORMATION:

NAME	COUNTRY
YOSHIMURA, TORU	

INT-CL (IPC): G01 N 33/576; G01 N 33/531

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw Desc | Image

29. Document ID: JP 07048277 A

L11: Entry 29 of 44 File: JPAB Feb 21, 1995

PUB-NO: JP407048277A
DOCUMENT-IDENTIFIER: JP 07048277 A
TITLE: HEPATITIS A VIRUS VACCINE

PUBN-DATE: February 21, 1995

INVENTOR-INFORMATION:

NAME	COUNTRY
ABOUD, ROBERT A	
AUNINS, JOHN G	
BUCKLAND, BARRY C	
DEPHILLIPS, PETER A	
HAGEN, ANNA J	
HENNESSEY, JR JOHN P	
JUNKER, BETH	
LEWIS, JOHN A	
OLIVER, CYNTHIA NEWELL	
ORELLA, CHARLES J	
SITRIN, ROBERT D	

INT-CL (IPC): A61 K 39/29; A61 K 39/00

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

30. Document ID: AU 200175166 A, WO 200193898 A1

L11: Entry 30 of 44 File: DWPI Dec 17, 2001

DERWENT-ACC-NO: 2002-154554
DERWENT-WEEK: 200225
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: Treatment of disease caused by e.g. influenza virus comprises administration of composition containing polypeptide, having identity of amino acid sequences

INVENTOR: CHISARI, F V; ESSEP, K M ; POSENBEPG, M ; TAL SINGER, R ; WOODNUTT, G

PRIORITY-DATA: 2000US-208869P (June 2, 2000)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN IPC
AU 200175166 A	December 17, 2001		000	A61K038/19
WO 200193898 A1	December 13, 2001	E	041	A61K038/19

INT-CL (IPC): A61 K 38/19

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

31. Document ID: KR 2001054305 A

L11: Entry 31 of 44 File: DWPI Jul 2, 2001

DERWENT-ACC-NO: 2002-053634
DERWENT-WEEK: 200207
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: Process for producing varicella-zoster virus-hepatitis virus combined vaccine

INVENTOR: JUNG, S T; NOH, J R ; PARK, H J

PRIORITY-DATA: 1999KR-0055076 (December 6, 1999)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
KR 2001054305 A	July 2, 2001		000	A61K039/29

INT-CL (IPC): A61 K 39/29

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

32. Document ID: WO 200014263 A2

L11: Entry 32 of 44 File: DWPI Mar 16, 2000

DERWENT-ACC-NO: 2000-257006
DERWENT-WEEK: 200022
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: Recombinant hepatitis A virus (HAV) comprising a heterologous nucleic acid sequence, useful as a vaccine for prophylaxis or treatment of hepatitis

INVENTOR: BEARD, M R; LEMON, S M

PRIORITY-DATA: 1998US-0098945 (September 3, 1998)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 200014263 A2	March 16, 2000	E	081	C12N015/86

INT-CL (IPC): C12 N 15/36; C12 N 15/40; C12 N 15/51; C12 N 15/86

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

33. Document ID: WO 9903492 A1, EP 948347 A1

L11: Entry 33 of 44 File: DWPI Jan 28, 1999

DERWENT-ACC-NO: 1999-131863
DERWENT-WEEK: 199948
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: New polypeptide containing compositions - preferably obtained from root tubers of Dei-Bai plants, used for treating viral infections or hepatoma

INVENTOR: CHEN, S; WANG, X

PRIORITY-DATA: 1997WO-US11997 (July 16, 1997)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9903492 A1	January 28, 1999	E	030	A61K038/16
EP 948347 A1	October 13, 1999	E	000	A61K038/16

INT-CL (IPC): A61 K 31/70; A61 K 38/16

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

---

34. Document ID: JP 10273555 A

L11: Entry 34 of 44 File: DWPI Oct 13, 1998

DERWENT-ACC-NO: 1998-603315
DERWENT-WEEK: 199903
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: Inorganic fibre-reinforced composite - comprises inorganic fibre surface treated with silane coupling agents

PRIORITY-DATA: 1997JP-0077852 (March 28, 1997)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 10273555 A	October 13, 1998		006	C08K009/02

INT-CL (IPC): C08 K 9/02; C08 L 21/00; C08 L 101/00

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw. Desc | Image

---

35. Document ID: WO 9734136 A2, AU 9723180 A, EP 888549 A2, EP 888549 B1, DE 69701867 E, US 6156499 A

L11: Entry 35 of 44 File: DWPI Sep 18, 1997

DERWENT-ACC-NO: 1997 489240
DERWENT-WEEK: 199745
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: Detecting antibodies to hepatitis A virus 3C proteinase by complex formation with antigen, allows differentiation between infection and the results of vaccination, and can be used to monitor effects of treatment

INVENTOR: EMERSON, S U; PURCELL, R H ; SCHULTHEISS, T ; STEWART, D ; MORRIS, T S

PRIORITY-DATA: 1996US-013333P (March 13, 1996), 1998US-0142239 (September 3, 1998)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9734136 A2	September 18, 1997	E	041	G01N000/00
AU 9723180 A	October 1, 1997		000	G01N033/50
EP 888549 A2	January 7, 1999	E	000	G01N033/569
EP 888549 B1	May 3, 2000	E	000	G01N033/569
DE 69701867 E	June 8, 2000		000	G01N033/569
US 6156499 A	December 5, 2000		000	C12Q001/70

INT-CL (IPC): C12 Q 1/70; G01 N 0/00; G01 N 33/50; G01 N 33/569

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Clip Img | Image

---

36. Document ID: US 5496546 A

L11: Entry 36 of 44 File: DWPI Mar 5, 1996

DERWENT-ACC-NO: 1996-150678
DERWENT-WEEK: 200201
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: New 2,4-di:nitrophenyl and 2,4-di:nitro-5-fluorophenyl poly-adenylic acid derivs. - are viral reverse transcriptase inhibitors, useful for treating diseases caused by RNA viruses e.g. AIDS caused by HIV

INVENTOR: KANG, I; RAHMAN, M H ; WANG, J H

PRIORITY-DATA: 1994US-0200650 (February 23, 1994), 1993US-0022055 (February 24, 1993)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
US 5496546 A	March 5, 1996		010	A61K031/765

INT-CL (IPC): A61 K 31/765; A61 K 31/785

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Clip Img | Image

---

37. Document ID: WO 9604376 A1, US 5622861 A, AU 9532389 A

L11: Entry 37 of 44 File: DWPI Feb 15, 1996

DERWENT-ACC-NO: 1996-129392
DERWENT-WEEK: 199613
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: DNA encoding Hepatitis A virus receptor and its fragments - useful for the detection, diagnosis, prevention and treatment of HAV infection

INVENTOR: FEINSTONE, S M; KAPLAN, G

PRIORITY-DATA: 1994US-0287001 (August 5, 1994)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9604376 A1	February 15, 1996	E	052	C12N015/12
US 5622861 A	April 22, 1997		017	C12N005/10
AU 9532389 A	March 4, 1996		000	C12N015/12

INT-CL (IPC): A01 K 67/027; A61 K 38/17; C07 K 14/705; C12 N 5/10; C12 N 7/02; C12 N 15/12; C12 N 15/85; C12 Q 1/70

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

38. Document ID: JP 08005637 A

L11: Entry 38 of 44 File: DWPI Jan 12, 1996

DERWENT-ACC-NO: 1996-100913
DERWENT-WEEK: 199611

TITLE: Determination of HAV antibody for clinical tests - by using surfactant treated HAV antigen, grown from infected cultured cells

PRIORITY-DATA: 1994JP-0156467 (June 16, 1994)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 08005637 A	January 12, 1996		009	G01N033/576

INT-CL (IPC): G01 N 33/531; G01 N 33/576

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

39. Document ID: HU 70982 T, EP 583142 A2, WO 9403589 A2, AU 9344500 A, CA 2103515 A, WO 9403589 A3, JP 07048277 A, EP 583142 A3, NO 9500483 A, FI 9500567 A, ZA 9305723 A, TW 259708 A, SK 9500184 A3, CZ 9500347 A3, CN 1099798 A

L11: Entry 39 of 44 File: DWPI Nov 28, 1995

DERWENT-ACC-NO: 1994-050440
DERWENT-WEEK: 199734

TITLE: Prodn. of hepatitis A virus vaccine - by large scale culturing of virus followed by purification to obtain highly-pure HAV protein

INVENTOR: ABOUD, R A; AUNINS, J G ; BUCKLAND, B C ; DEPHILLIPS, P A ; HAGEN, A J ; HENNESSEY, J P ; JUNKER, B ; LEWIS, J A ; OLIVER, C N ; ORELLA, C J ; SITRIN, R D ; NEWELL, O ; DE PHILLIPS, P A

PRIORITY-DATA: 1992US-0926873 (August 10, 1992), 1993CN-0117633 (August 6, 1993)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
HU 70982 T	November 28, 1995		000	C12N007/02
EP 583142 A2	February 16, 1994	E	071	C12N007/02
WO 9403589 A2	February 17, 1994	E	126	C12N007/02
AU 9344500 A	February 10, 1994		000	C12N007/02
CA 2103515 A	February 11, 1994		000	C12N007/00
WO 9403589 A3	March 31, 1994		000	C12N007/02
JP 07048277 A	February 21, 1995		054	A61K039/29
EP 583142 A3	April 13, 1994		000	C12N007/02
NO 9500483 A	April 7, 1995		000	C12N000/00
FI 9500567 A	April 5, 1995		000	A61K000/00
ZA 9305723 A	May 31, 1995		145	A61K000/00
TW 259708 A	October 11, 1995		000	A61K035/76
SK 9500184 A3	November 8, 1995		000	C12N007/02
CZ 9500347 A3	March 13, 1996		000	C12N007/02
CN 1099798 A	March 8, 1995		000	C12N007/00

INT-CL (IPC): A61K 0/00; A61K 35/76; A61K 39/00; A61K 39/29; C12N 0/00; C12N 7/00; C12N 7/02; C12N 7/06

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Image

---

40. Document ID: WO 9317042 A1, FR 2688005 A1

L11: Entry 40 of 44 File: DWPI Sep 2, 1993

DERWENT-ACC-NO: 1993-288359
DERWENT-WEEK: 199336
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: New peptide(s) for raising antibodies against milk proteins - recognising only proteins from partic. species, used to detect adulteration of foods and cosmetics

INVENTOR: BESANCON, P; BITRI, L ; LAFONT, J ; ROLLAND, M ; ROLAND, M

PRIORITY-DATA: 1992FR-0002398 (February 28, 1992)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9317042 A1	September 2, 1993	F	040	C07K015/00
FR 2688005 A1	September 3, 1993		035	C07K007/06

INT-CL (IPC): A61K 39/385; C07K 7/06; C07K 7/08; C07K 15/00; G01N 33/547; G01N 33/68

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC | Draw Desc | Clip Img | Image

---

41. Document ID: WO 9219268 A1, AU 9217436 A, EP 542949 A1, JP 06500238 W, ES 2056780 T1, AU 662528 B, US 5549896 A, EP 542949 B1, DE 69224590 E, ES 2056780 T3

L11: Entry 41 of 44 File: DWPI Nov 12, 1992

DERWENT-ACC-NO: 1992-398535
DERWENT-WEEK: 199843
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: New hepatitis A virus strain RG-SB XA112 (CNCM I-1080) - used as vaccine useful for preventing and diagnosing hepatitis A virus infection

INVENTOR: BRANTSCHEN, S; GLUCK, R ; GLUECK, R

PRIORITY-DATA: 1991EP-0107526 (May 8, 1991)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
WO 9219268 A1	November 12, 1992	E	028	A61K039/29
AU 9217436 A	December 21, 1992		000	A61K039/29
EP 542949 A1	May 26, 1993	E	028	A61K039/29
JP 06500238 W	January 13, 1994		007	C12N007/00
ES 2056780 T1	October 16, 1994		000	A61K039/29
AU 662528 B	September 7, 1995		000	C12N007/02
US 5549896 A	August 27, 1996		007	A61K039/29
EP 542949 B1	March 4, 1998	E	012	A61K039/29
DE 69224590 E	April 9, 1998		000	A61K039/29
ES 2056780 T3	August 16, 1998		000	A61K039/29

INT-CL (IPC): A61 K 39/125; A61 K 39/29; A61 K 39/395; C12 N 7/00; C12 N 7/02; C12 P 21/08; C12 Q 1/70; G01 N 33/576

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWMC | Draw. Desc | Image

42. Document ID: JP 01168876 A

L11: Entry 42 of 44 File: DWPI Jul 4, 1989

DERWENT-ACC-NO: 1989-232462
DERWENT-WEEK: 198932
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: Surface treating electroplated steel sheet - by applying phosphoric acid contg. chromate treating soln. to sheet guided from plating bath and rinsing with coating type chromating soln.

PRIORITY-DATA: 1987JP-0326527 (December 23, 1987)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 01168876 A	July 4, 1989		003	

INT-CL (IPC): C23C 22/24

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWMC | Draw. Desc | Image

43. Document ID: JP 58132124 A

L11: Entry 43 of 44 File: DWPI Aug 6, 1983

DERWENT-ACC-NO: 1983-761878

DERWENT-WEEK: 198337
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: Carbon fibre raw material prodn. - by two=stage heat treatment of pitch

PRIORITY-DATA: 1982JP-0015141 (February 2, 1982)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
JP 58132124 A	August 6, 1983		003	

INT-CL (IPC): D01F 9/12

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

44. Document ID: GB 1207009 A, ZA 6908356 A

L11: Entry 44 of 44 File: DWPI

DERWENT-ACC-NO: 1970-68784R
DERWENT-WEEK: 197038
COPYRIGHT 2002 DERWENT INFORMATION LTD
TITLE: Screenings washer in sewage treatment hav- - ing a higher maximum throughput rate

PRIORITY-DATA: 1968GB-0056217 (November 20, 1968)

PATENT-FAMILY:

PUB-NO	PUB-DATE	LANGUAGE	PAGES	MAIN-IPC
GB 1207009 A			000	
ZA 6908356 A			000	

INT-CL (IPC): B07B 1/08

Full | Title | Citation | Front | Review | Classification | Date | Reference | Sequences | Attachments | KWIC
Draw. Desc | Image

Generate Collection | Print

Terms	Documents
HAV near10 treat$	44

Display Format: - Change Format

Previous Page Next Page

WEST

Generate Collection | Print

L10: Entry 4 of 5 File: USPT Sep 21, 1999

DOCUMENT-IDENTIFIER: US 5955318 A
TITLE: Reagents and methods useful for controlling the translation of hepatitis GBV proteins

Brief Summary Paragraph Right (12):
It therefore would be advantageous to provide reagents and methods for controlling the translation of HGBV proteins from HGBV nucleic acids. Such reagents would comprise antisense nucleic acid sequences or other compound which may specifically destabilize (or stabilize) the IRES structure. Such nucleic acid sequences or compounds could greatly enhance the ability of the medical community to provide a means for treating an individual infected with GB virus(es). In addition, IRESs are among the most highly consereved nuclcotide sequences. Identification of such a sequence immediately suggests a target for probe-based detection reagents. Diagnostic or screening tests developed from these reagents could provide a safer blood and organ supply by helping to eliminate GBV in these blood and organ donations, and could provide a better understanding of the prevalence of HGBV in the population, epidemiology of the disease caused by HGBV and the prognosis of infected individuals. Additionally, these consereved structures may provide a means for purifying GBV proteins for use in diagnostic assays.

Drawing Description Paragraph Right (14):
FIG. 2B shows a Phosphorimager scan of products generated by IVTT reactions programmed with pA15-707/CAT (A 15-707, lane 1), pC1-631/CAT (C1-631, lane 2), pHAV-CAT1 (HAV, lane 3), pC631-1/CAT (C631-1, lane 4), SspI-linearized pA15-707/CAT (A15-707-SspI, lane 5) and pC1-631/CAT (C1 -631-SspI, lane 6).

Detailed Description Paragraph Right (36):
The reagents and methods of the present invention are made possible by the provision of a family of closely related nucleotide sequences present in the plasma, serum or liver homogenate of an HGBV infected individual, either tamarin or human. This family of nucleotide sequences is not of human or tamarin origin, since it hybridizes to neither human nor tamarin genomic DNA from uninfected individuals, since nucleotides of this family of sequences are present only in liver (or liver homogenates), plasma or serum of individuals infected with HGBV. In addition, the family of sequences has shown no significant identity at the nucleic acid level to sequences contained within the HAV, HBV, HCV, HDV and HEV genome, and low level identity, considered not significant, as translation products. Infectious sera, plasma or liver homogenates from HGBV infected humans contain these polynucleotide sequences, whereas sera, plasma or liver homogenates from non-infected humans has not contained these sequences. Northern blot analysis of infected liver with some of these polynucleotide sequences has demonstrated that they are derived from a large RNA transcript similar in size to a viral genome. Sera, plasma or liver homogenates from HGBV-infected humans contain antibodies which bind to this polypeptide, whereas sera, plasma or liver homogenates from non-infected humans do not contain antibodies to this polypeptide; these antibodies are induced in individuals following acute non-A, non-B, non-C, non-D and non-E hepatitis infection. By these criteria, it is believed that the sequence is a viral sequence, wherein the virus causes or is associated with non-A, non-B, non-C, non-D and non E hepatitis.

Detailed Description Paragraph Right (57):
To test for IRES function in GBV-B (SEQUENCE ID NO 32), the 5' NTR of this virus was used to replace the 5' NTR of hepatitis A virus (HAV) in the pLUC-HAV-CAT plasmid described by Whetter et al. (J. Virol. 68:5253-5263, 1994). The 5' NTR of GBV-B was amplified from a plasmid clone using SEQUENCE ID NO. 58 (UTR-B.1) and SEQUENCE ID. NO. 59 (NTR-B-a1) as primers Briefly, a 50 .mu.l PCR was set up using a Perkin-El

mer PCR kit as described by the manufacturer with 1 .mu.M primers, 2 mM MgCl.sub.2 and approximately 10 ng of plasmid. This reaction was amplified for 20 cycles (94.degree. C., 20 sec; 55.degree. C., 30 sec; 72.degree. C., 30 sec) followed by a final extension at 72.degree. C. for 10 min. The completed reaction then was held at 4.degree. C. This product was extracted with phenol:chloroform and precipitated as described in the art. The 3' terminal adenosine residues added by the AmpliTaq.RTM. polymerase were removed from this product by incubation with T4 DNA polymerase and deoxynucleotide triphosphates as described (Sambrook et al., Molecular Cloning: A Laboratory Manual, Cold Spring Harbor Press, 1989). After heat inactivation, the product was digested with Xba I and gel purified as described in the art. The purified product was ligated to pHAV-CAT1 (Whetter et al. J. Virol. 68:5253-5263, 1994) that had been cut with HindIII, end-filled with Klenow polymerase and deoxynucleotide triphosphates, heat-inactivated, digested with Xba I, treated with bacterial alkaline phosphatase, extracted with phenol:chloroform, and precipitated as described in the art. The constructed plasmid, pGBB-CAT1, was digested with Sac I, blunt-ended with T4 DNA polymerase and deoxynucleotide triphosphates, heat-inactivated, and digested with Not I as described in the art. The 1.3 kbp product from these reactions was gel purified and cloned into pLUC-HAV-CAT (Whetter et al. J. Virol. 68:5253-5263, 1994) that had been digested with HindIII, end-filled with Klenow polymerase and deoxynucleotide triphosphates, heat-inactivated, digested with Not I, treated with bacterial alkaline phosphatase, extracted with phenol:chloroform, and precipitated as described in the art. The resultant plasmid, pLUC-GBB-CAT was used in in vitro transcription-translation experiments to test for an IRES function.

Detailed Description Paragraph Right (58):
An in vitro transcription-translation assay was performed using the T.sub.N T.TM. T7 coupled reticulocyte lysate system from Promega (Madison, Wis.) as described by the manufacturer. The plasmids tested were pLUC-GBB-CAT (described above), pLUC-HAV-CAT (positive control from Whetter et al. J. Virol. 68:5253-5263, 1994), and pLUC-.DELTA.355-532 (negative control from Whetter et al. J. Virol. 68:5253-5263, 1994). The products (labeled with .sup.35 S methionine) were run on a 10% Laemmli gel as described in the art. The gel was fixed in 10% methanol, 10% acetic acid for 10 minutes, dried down and exposed to a PhosphoImager.RTM. screen (Molecular Dynamics, Sunnyvale, Calif.). The products were visualized with the PhosphoImager.RTM.. In addition, the reactions were examined for Luc and CAT activity using commercially available kits (Promega, Madison, Wis.) (data not shown).

Detailed Description Paragraph Right (59):
All three reactions contained luciferase activity and a band consistent with the size expected for luciferase (transcribed from the LUC gene in the plasmid). LUC expression, which is a measure of the level of translation that initiates from the 5' end of the mRNA, appeared to be equivalent in the three reactions. Thus, equivalent amounts of RNA templates were present in a translatable form in these three reactions. The pLUC-HAV-CAT and the pLUC-GBB-CAT reactions also possessed chloramphenicol acetyltransferase (CAT) activity and contained a band consistent with the size expected for CAT (from the CAT gene in the plasmid). This band is not seen in the pLUC-.DELTA.355-532 negative control. CAT expression measures the level of internal translation initiation. Because translation of the CAT gene requires the existence of an IRES in this plasmid construct, the 5' NTR of GBV B must be providing this function. Therefore, similar to HCV, GBV-B's 5' NTR contains an IRES. Further studies of these plasmids, both in vitro and in vivo are ongoing to better characterize the IRES in GBV B.

Detailed Description Paragraph Right (60):
Various monocistronic and bicistronic plasmids were constructed with PCR-amplified sequences of GBV-A and GBV-C. PCRs utilized components of the GeneAmp PCR Kit with AmpliTaq (Perkin-Elmer) as directed by the manufacturer with final reaction concentrations of 1 .mu.M for oligonucleotide primers and 2 mM MgCl.sub.2. PCR products were digested with restriction endonucleases, gel purified and cloned using standard procedures as described by J. Sambrook et al., Molecular Cloning: A Laboratory Manual. Cold Spring Harbor Laboratory, Cold Spring Harbor (1989). Monocistronic fusions between GBV sequences and bacterial chloramphenicol acetyltransferase (CAT) were generated by replacing the hepatitis A virus (HAV) HindIII/XbaI fragment of pHAV-CAT1 (described by L. E. Whetter et al., J. Virology 68:5253-5263 (1994) with PCR-amplified cDNA from the 5' ends of GBV-A and GBV-C. The bicistronic constructs were generated in pT7/CAT/ICS/Luc, described by D. Macejak et al., in M. A. Brinton et al., eds., New Aspects of Positive-Strand RNA Viruses,

American Society for Microbiology, Washington, D.C.,1990, p. 152-157, and provided as a gift by P. Sarnow, in a two step procedure. First, monocistronic fusions between GBV and luciferase (Luc) were constructed by inserting GBV sequences into the HindIII/NcoI-cut pT7/CAT/ICS/Luc. Bicistronic vectors were constructed by cloning the HindIII/blunt/SacI GBV fragment from these monocistronic vectors into pT7/CAT/ICS/Luc which had been digested with SalI (blunt) and SacI. The sequence of the cloned inserts and ligation junctions were confirmed by dsDNA sequencing (Sequenase 2.0, USB, Cleveland). Nomenclature (e.g. A15-707) describes the source (GBV-A) and range (nts 15 to 707) of sequence incorporated into the various vectors.

Detailed Description Paragraph Right (70):
In vitro transcription-translation (IVTT) reactions containing rabbit reticulocyte lysates were programmed with pA15-707/CAT, pC1-631/CAT and a positive control plasmid, pHAV-CAT1, which contained the 5' NTR of hepatitis A virus (HAV) inserted upstream of CAT. All three plasmid DNAs directed the translation of discreet products migrating with somewhat different molecular masses in SDS-PAGE, as shown in FIG. 2B. Referring to the FIG. 2B, the image was generated from a 16 h exposure with a linear range of 7 to 200. GBV-CAT product in lanes 1 and 2 are present at 26 to 27% of the level of the CAT product made from pHAV-CAT1 (lane 3) when the number of Cys residues have been normalized for each product. The products derived from pA15-707/CAT and pC1-631/CAT were slightly larger than that derived from pHAV-CAT1, indicating that translation was initiating upstream of the site of GBV-CAT fusion. In contrast, no product was detected in IVTT reactions programmed with pC631-1/CAT which contained the GBV-C sequences inserted in the antisense orientation relative to CAT. Only the pHAV-CAT1-programmed reaction possessed detectable CAT activity (data not shown). The absence of activity in the products of reactions programmed with pA15-707/CAT and pC1-631/CAT was likely to be due to the misfolding of the CAT protein as a result of its fusion with the N-terminal segment of the GBV polyprotein.

Detailed Description Paragraph Right (76):
The quantity of CAT produced from the control plasmid, pHAV-CAT1 (seen in FIG. 5B, lane 9), was considerably greater than that produced from either the GBV-A (SEQUENCE ID NO 23) or GBV-C (SEQUENCE ID NO 4) monocistronic constructs. This is of interest, because the HAV IRES has been known to direct the internal initiation of translation with very low efficiency relative to other picornaviral IRES elements (L. E. Whetter et al., J. Virol. 68:5253-5263 [1994]). The low production of GBV-CAT proteins was believed not likely to be due to differences in T7 transcriptional efficiency in these IVTT assays, as similar results were obtained with reactions programmed with equal amounts of RNA (data not shown). Thus, it appears that the level of GBV-CAT protein reflects the extremely low efficiency with which the GBV IRESs direct internal initiation in vitro.

Detailed Description Paragraph Right (85):
Although all of these observations suggest the strong likelihood that GBV-A and GBV-C translation is initiated by internal ribosomal entry, only minimal translation of the downstream cistron was noted from bicistronic transcripts containing the 5' NTRs of these viruses in the intercistronic space. Translation directed by the GBV-A and GBV-C 5' NTRs within a bicistronic context was only 2 to 5% that of the HCV IRES in rabbit reticulocyte lysates in vitro (FIG. 6). The very low activities of the GBV-A and GBV-C IRESs suggest several possibilities. First, it is possible that these viruses may in fact have IRES elements with extraordinarily low activity. This is supported by a very low level of translation directed by monocistronic transcripts containing the 5' ends of GBV-A and GBV-C in the in vitro system. Specifically, after adjustment for the number of Cys residues in each construct, GBV CAT fusion proteins were translated from pA15-707/CAT and pC1-631/CAT transcripts at only 20 to 41% of the level produced by the IRES of HAV. The HAV IRES is known to have very low activity, in the range of 2% of the Sabin poliovirus type 1 IRES within HAV permissive cells (see, D. E. Schultz et al., J. Virol. 70:1041-1049 [1996] and L. E. Whetter et al., supra). Thus, the low GBV IRES activity noted in vitro may be a true reflection of the strength of these translation elements. Limiting production of viral proteins within an infected host might act to reduce recognition of the infection by the immune system and thus promote viral persistence. Alternatively, it is possible that the low IRES activity detected in reticulocyte lysates reflects a requirement for a specific host cell translation factor which is absent in reticulocyte lysates. The nuclear autoantigen, La, is an example of such a specific cellular factor. It is required for efficient translation directed by the poliovirus IRES, but is not present in sufficient

amounts in reticulocyte lysates. K. Meerovitch et al., J. Virol. 67:3798-3807 (1993). It is difficult to comment more specifically on this possibility, since the cellular tropisms of GBV-A and GBV-C are unknown. Yet a third possibility is that the low translational activity of the GBV-A and GBV-C 5' NTRs may reflect a requirement for additional, yet to be identified 5' viral sequences that may be present in these viral genomes. It is also conceivable that translation is initiated by a mechanism distinct from both the classic 5' scanning and IRES-directed translation initiation mechanism. For example, relatively efficient translation initiation at an internal site in monocistronic transcripts but low translational activity in the bicistronic context could be explained by a mechanism involving "ribosome shunting" (J. Futterer et al., Cell 73:789-802 [1993]) following recognition of the 5' end of the RNA by the 40S ribosome subunit. Further studies will be required to distinguish between these different possibilities.

WEST

Generate Collection | Print

L2: Entry 1 of 2 File: USPT Apr 14, 1998

DOCUMENT-IDENTIFIER: US 5738985 A
TITLE: Method for selective inactivation of viral replication

Detailed Description Paragraph Right (270):
Translational initiation of rhinovirus mRNA has been shown to occur by a cap-independent non-scanning mechanism, in which the 40S ribosome locates the correct start codon by binding directly to a region of the viral 5' NTR, termed the internal ribosomal entry site (IRES) (Borman and Jackson, 188 Virology 685, 1992). Similar IRES-dependent translational initiation mechanisms have been proposed for other picornaviruses including poliovirus (Pelletier and Sonenberg, 334 Nature 320, 1988, and 63 J. Virol. 441, 1989), EMCV (Jang et al., 62 J. Virol. 2636, 1988, and 63 J. Virol. 1651, 1989; Molla et al., 356 Nature 255, 1992), FMDV (Kuhn et al., 64 J. Virol. 4625, 1990), HAV (Brown et al., 65 J. Virol. 5828, 1991), and an enveloped plus-strand RNA virus, hepatitis C virus (Tsukiyama-Kohara et al., 66 J. Virol. 1476, 1992) .

Detailed Description Paragraph Right (305):
Attempts to transmit HAV to experimental were generally unsuccessful until the 1960s. An outbreak of infectious hepatitis among chimpanzee handlers at a United States Air Force base during 1958 1960 (Hilis, 1961, Am. J. Hyg. 73 316 328.; Hills, 1963, Transfusion 3, 445 453.) restimulated interest in subhuman primates as possible models for human hepatitis. In 1962, Deinhardt et al. (Dienhardt et al., 1962, Am. J. Hyg. 75, 311-321.) described the development of mild liver enzyme abnormalities and histopathologic changes in about two-thirds of 37 chimpanzees inoculated with acute-phase serum or feces. Expectations of jaundice (which rarely occurs in subhuman primates), as well as the assay of aspartate aminotransferase instead of the more sensitive and specific aminotransferase, served to minimize the significance of these results.

Detailed Description Paragraph Right (306):
In 1967, Deinhardt, et al. (J. Exp. Med. 125, 673-688.) successfully transmitted and passaged hepatitis in marmosets by using acute-phase sera from patients with disease that had the epidemiologic characteristics of hepatitis A. Interpretation of the results was initially hampered by the presence of a latent marmoset agent (or an agent of non-A, non-B hepatitis) in some Saguinus species that was reactivated by experimental manipulations, resulting in hepatitis (Parks and Melnick, 1969, J. Infect. Dis. 120, 539-547, 548-559.). Their results were subsequently confirmed when coded control sera and acute-phase sera from HAV-infected human volunteers were correctly identified upon inoculation into marmosets (Holmes et al., 1971, J. Infect. Dis. 124, 520-521.; Holmes et al., 1969, Science 165, 816-817.). Further evidence for transmission to marmosets and eventually to chimpanzees soon followed (Dienstag et al., 1975, J. Infect. Dis. 132,532-545.; Lorenz et al., Proc. Soc. Exp. Biol. Med. 135, 348 354.; Lundquist et al., 1974, Proc. Natl. Acad. Sci. USA 71, 4774-4777.; Maynard et al., 1975, J. infect. Dis. 131, 194-196.; Maynard et al., 1975, Am. J. Med. Sci. 270, 81-85.; Provost et al., 1977, Proc. Soc. Exp. Biol. Med. 155, 283 286.)

Detailed Description Paragraph Right (307):
HAV produces disease in humans, chimpanzees (Pan troglodytes) (Dianstag et al., 1975, J. Infect. Dis. 132, 532 545.; Lundquist et al., 1974, Proc. Natl. Acad. Sci. USA 71, 4774-4777.; Maynard et al., 1975, J. Infect. Dis. 131, 194-196.; Maynard et al., 1975, Am. J. Med. Sci. 270, 81-85.), owl monkeys (Aotus trivirgatus) (LeDuc et al., 1983, Infect. Immun. 40, 766-772.; Lemon, 1982, J. Med. Virol. 10, 25-36.), stump-tailed monkeys (Macaca speciosa) (Mao et al., 1981, J. Infect. Dis. 144, 55-60.), and several species of South American marmoset (tamarin) monkeys (most

notably Saquinus mystax and S. labiatus) (Deinhardt et al., 1967, J. Exp. Med. 125, 673-688.; Holmes et al., 1971, J. Infect. Dis. 124,520-521.; Holmes et al., 1969, Science 165, 816-817; Lorenz et al., Proc. Soc. Exp. Biol. Med. 135, 348-354.; Mascoli et al., 1973, Proc. Soc. Exp. Biol. Med. 142, 276-282.; Provost et al., 1977, Proc. Soc. Exp. Biol. Med. 155, 283-286.; Purcell et al., 1975, Am. J. Med. Sci. 270, 61-71.). Disease in nonhuman primates resembles that in humans but is usually milder. After infecting these animals, HAV or viral antigan can usually be detected in serum, liver, bile, and faces.

Detailed Description Paragraph Right (308):
Other primate species are susceptible to infection but do not develop disease; this limits their usefulness for laboratory studies of human HAV strains (Burke et al., 1981, Lancet, 2,928.; Burke et al., 1984, AM J. Trop. Med. Hyg. 33,940-944,; Eichberg et al., 1980, Lab Anim. Sci. 30, 541-543.). Cynomolgus monkeys (Macaca fascicularis) were found to have been infected with HAV in the wild (Burke and Heisey, 1984, Am. J. Trop. Med. Hyg. 33, 940-944.). In the laboratory, hepatitis was induced in M. fascicularis and M. arctoides by experimental inoculation with the YAM-55 strain of HAV isolated from cynomolgus monkeys but not by human HAV strain HAS15 (Andzhaparidze et al., 1987, Vopr Virus 2, 440-448.). These data, along with the demonstration of genomic differences between the PA21 strain of the HAV isolated from owl monkeys and the human HAV strain HM175, suggest that host range variants of HAV may have been selected in subhuman primates (Lemon et al., 1987, J. Virol. 61, 735-742.). In addition, it appears that a host range alteration can be experimentally induced. After 20 passages in marmosets, HAV strain MS-1 was more virulent for marmosets but was attenuated for chimpanzees (Bradley et al., 1984, J. Med. Virol. 14, 373-386.).